STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

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February 1, 2017

Mr. Scott Hicks, Field Supervisor
Fish and Wildlife Service
United States Department of the Interior
East Lansing Field Office (ES)
2651 Coolidge Road, Suite 101
East Lansing, Michigan 48823-6316

Dear Mr. Hicks:

SUBJECT National Pollutant Discharge Elimination System (NPDES)
Permit No. MI0059945
Designated Name: Aquila Resources Inc-Back Forty Project

Thank you for the comment letter dated October 31, 2016, regarding the draft permit for Aquila Resources Inc- Back Forty Project (Permit No. MI0059945). Provided below are responses to the comments.

Endangered Species Act Comment

Regarding the Northern long-eared bat, this species is not aquatic and the draft NPDES discharge permit has no impact pertaining to this species, or its critical habitat. The Part 632 mining permit issued by the Michigan Department of Environmental Quality on December 28, 2016, included a permit condition requiring Aquila Resources to submit a bat survey for approval prior to construction. The applicant will not be approved to proceed with the pertinent operations until the required details are satisfactorily identified and described.

Trust Resources Species Comment

For the general concerns regarding Lake Sturgeon, the draft NPDES permit includes discharge limits and monitoring requirements for an extensive list of pollutants identified during development of the NPDES permit. The water quality-based effluent limit (WQBEL) discharge requirements in the draft permit have been established to protect designated uses in the Menominee River. The WQBELs were developed consistent with applicable rules and regulations (Part 4, Michigan Water Quality Standards and Part 8, Water Quality-Based Effluent Limit Development for Toxic Substances).

Per response provided for the Part 632 mining permit, the permittee will be required to utilize soil erosion and sedimentation measures, including monitoring and maintenance, to prevent erosion from occurring, and siltation of the Menominee River which could negatively impact Lake Sturgeon spawning habitat. The permittee must also conduct fish community surveys prior to operations to confirm seasonal baseline conditions. The permittee will also be required

to monitor fish and fish habitat, and biodiversity during mine operations. The permittee will be required to utilize results of the fish and fish habitat surveys in conjunction with ambient water quality monitoring results, as applicable, to identify actual or potential adverse impacts to water quality that may be caused by a release associated with a mining activity that is the responsibility of the permittee. The designs and longevity of the tailings management facilities, contact water basins, and the river pillar/cut off wall, the engineered systems that Aquila has proposed for containment of the tailings and treatment of water are widely used in the mining industry and other heavy industry, and have been effective at protecting water resources. Details regarding the designs of the tailings management facilities, contact water basins, and the river pillar/cut off wall can be found in the compiled response to comment document for the consolidated public comment period on the air, mining and water permits at the following link: http://www.michigan.gov/documents/deq/deq-oogm-Mining-AquilaBack40-responsecomments_547561_7.pdf

The draft NPDES permit has been revised to include a reopener clause to modify the permit if other pollutants are determined to be of concern based on the results of the ambient monitoring required under the Part 632 mining permit. The ambient monitoring data is required to be submitted in the MiWaters data base and will be available to the public.

Toxicity Testing

The potential toxicity caused by the additive effects of multiple contaminants in the discharge is addressed by Whole Effluent Toxicity (WET) testing requirements in the permit. The draft permit includes an acute toxicity limit of 1.0 TUA, which in combination with individual pollutant effluent limits, will be protective of conditions in the receiving water. The specific concerns of fish passage and disturbance of habitat should be minimal and temporary based on the relative small size of the discharge compared to the larger receiving water flow.

The NPDES permit has been revised to include WET testing requirements using the glochidia and juvenile early life stages for a freshwater mussel. The threeridge mussel (*Amblema plicata*) was selected as the test species, as this species is acutely sensitive to a variety of contaminants (e.g., copper, zinc, and chloride) at low concentrations, and is found in the Menominee River near the site of the proposed outfall. Freshwater mussels have a unique life history that includes a parasitic lifestage (glochidia) that requires a host fish to complete development into juvenile mussels. Glochidia of the threeridge mussel are released from females once per year in the late summer to early fall. Because of the complex life history and seasonal timing of glochidia release, WET testing with threeridge mussel glochidia, or juvenile mussels, would only be plausible once per year. Therefore, an annual WET testing requirement using the threeridge mussel has been included in the NPDES permit.

The draft NPDES permit is currently being reviewed by the United States Environmental Protection Agency, Region 5 staff for consistency with state and federal regulations. We trust

that your concerns have been adequately addressed in the proposed NPDES permit. If you have any questions or need additional information, please feel free to contact me.

Sincerely,

Sylvia Heaton, Unit Supervisor
Lakes Michigan and Superior Permits Unit
Permits Section
Water Resources Division
517-449-6307

cc: Ms. Lisa Kaulfersch, Fish & Wildlife Service, USDI (electronic)
Ms. Melanie Burdick, Region 5, USEPA (electronic)
Ms. Krista McKim, Region 5, USEPA (electronic)
File (electronic)